

From owner-qrp-l@netcom.com Fri Feb 10 19:56:13 1995  
Message-Id: <9502102130.AA08628@interval.interval.com>  
Date: Fri, 10 Feb 1995 13:31:49 -0800  
From: burdick@interval.com (Wayne Burdick)  
Subject: "Indoor" Mobile Antennas

Wondering if anyone has any experience with mobile antennas for HF that are fully \*within\* the vehicle, e.g. thin wire elements actually buried in the windows or running around edges. Such antennas are bound to be inefficient at low frequencies (say 14MHz), but I'm looking for some good qualitative estimates of how these antennas compare with short, loaded external whips (maybe 12") and external wire loops very close to the car body, such as an electrically isolated metal luggage rack. My objective is to not have to use my Ham Stick when all I'm doing is casual listening around the bands.

The ideal in-vehicle antenna would be invisible (even to my YL) and durable (i.e., you don't break it opening the door). I'd like to experiment with hi-q loop tuners and compare the loss of an in-vehicle tuned loop to other antennas.

I imagine that critical factors include the antenna length, how much of it is coiled vs. straight, height relative to the windows, and orientation with respect to the largest RF-transparent openings (windshield and rear window).

Thanks,  
Wayne N6KR

From owner-qrp-l@netcom.com Sat Feb 11 00:46:10 1995  
Date: Fri, 10 Feb 95 15:20:05 HST  
From: jeffrey@math.hawaii.edu (Jeffrey Herman)  
Message-Id: <9502110120.AA22739@kahuna.math.hawaii.edu>  
Subject: /X

Are crystallized folks still signing /X ? I'd forgotten all about that from my novice days. I supposed those of us using 3579 kc color burst xtal xmtrs should use that to tell others that we are rock bound and can't qsy if there happens to be mutual qrm occurring.

Jeff NH6IL/QRP/X (looks like a computer directory)

From owner-qrp-l@netcom.com Fri Feb 10 17:10:26 1995  
Date: Fri, 10 Feb 1995 16:13:49 +0500

From: teda@meaddata.com (Ted Albert)  
Message-Id: <9502102113.AA29282@rain.meaddata.com>  
Subject: 79'er night results

I started monitoring around 9:15 PM between 3578 and 3580. Nothing but static. I kept listening and at 9:45 was ready to call it quits when low and behold there was a weak signal calling CQ QRP on 3580.6. The signal grew in strength over the next few minutes and there he was, W1FMR/X. It took two attempts for us to connect, but at 0250 I got him in the log with a 559 NH 1 watt. I sent him a 529 OH with 5 watts.

That made new state number two on 80 meters with both sides being QRP. The other contact was Ade, W0RSP in S. Dakota on Monday evening.

Hey Chuck, how about a hunt on 80 meters next year?

73 de Ted, KF8EE  
QRP ARCI # 8544  
G-QRP # 8661

From owner-qrp-1@netcom.com Sat Feb 11 00:26:54 1995  
Date: Fri, 10 Feb 1995 10:48:22 -0800 (PST)  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: 9030  
Message-Id: <Pine.SUN.3.90.950210104559.22970A-1000000@nimbus>

Opps,

I said drift in my 9030. Haw, I don't even have a 9030.

Change the 9030 to 9040!

XYL just said that I can go to Dayton....Getting so excited I can't type....

73's, Ron

.....KU7Y.....Monte "Ron" Stark.....  
....ku7y@sage.dri.edu.....Sun Valley, Nevada....  
.....ARRL.....NorCal #330.....NRA LIFE.....

From owner-qrp-1@netcom.com Fri Feb 10 16:15:22 1995  
Date: Fri, 10 Feb 1995 13:10:28 -0500 (EST)  
From: CEBIK@utkvx.utk.edu  
Subject: Re: another thought on painting for texture  
Message-Id: <Pine.3.89.9502101317.A541639479-0100000@utkvx.utk.edu>

When painting aluminum (after thorough cleaning and buffing with steel wool to scratch the surface for better adhesion) you can get some texture in the job this way: Just make a few passes with the spray can for each application. Let dry. Then again--about once an hour--up to seven or eight brief passes to get a very good coat. Each pass essentially puts a bunch of paint dots on the surface that dry without spreading. Spray from about a foot away from the surface. When I'm satisfied (or as satisfied as much as I am gonna get, since I always think I could have done it better), I use clear Krylon (no yellowing) as a protection coat (again, many thin coats). Have some panels over a decade old with no degradation of color and no flaking. Yes, it takes 2 or 3 evenings to paint a panel before final assembly, but is worth the wait (I just modify the circuit while waiting). Incidentally, I put any panel marking decals on after a good clear coat; then I clear coat again to protect them.

-73-

LB, W4RNL

From owner-qrp-l@netcom.com Fri Feb 10 23:16:17 1995  
Message-Id: <9502102011.AA03087@ig1.att.att.com>  
From: mvjfm@mvubr.att.com (James M Fitton +1 508 960 2577)  
Date: 10 Feb 95 15:04:00 -0500  
Subject: Colorburst Sprint

Only 4 QRP stations found on 3.579 CW last night.

Sprint runs each Thurs. eve (9-10 p.m. EST) during Feb.

KB8FRQ/X	MI	5W
NF0R/X	MO	5W
KF8EE	OH	5W
W1FMR/X	NH	1W

X = Xtal controlled....

(I only subscribe qrp-l on weekends)

73/72 Jim Fitton, W1FMR QRP-NE mvjfm@mvubr.att.com

From owner-qrp-l@netcom.com Fri Feb 10 15:52:12 1995  
From: PDouglas12@aol.com  
Date: Fri, 10 Feb 1995 14:08:18 -0500  
Message-Id: <950210140358\_18125603@aol.com>  
Subject: Dayton

Here I am at work with no radio mags handy. Need to know when Dayton weekend is this year and name and tel of the QRP hotel, and if they still have rooms.

Am considering making a car run from Long Island/metro NY and MAY have room for riders if it all works out. Will post here, if so. 72 Preston WJ2V

From owner-qrp-l@netcom.com Fri Feb 10 18:25:21 1995  
Date: Fri, 10 Feb 1995 11:54:01 -0500 (EST)  
From: Brien Pepperdine <pepperb@gov.on.ca>  
Subject: FAR board costs pls.  
Message-Id: <Pine.3.07.9502101101.A1089-b1000000@govonca>

Hello, is there anyone out there with a relatively current FAR board price list who could tell me the costs on the W7EL wattmeter board and on the SCAF (Switched Capacitor Audio Filter) board (from Oct. 1992 QST and page 16.39 of 1995 Handbook)?

I'd like to know the board costs as well as shipping etc. costs such that I can order in 2 wattmeter boards and one SCAF board.

I have all the parts and ICs etc. on hand, but now have decided to use PC boards instead of point to point for THESE versions - any future ones my qrp club fellows build they can decide whether they want to use a board or perf board / ground plane construction etc.

Thanks - finding out these costs will allow me to order them now instead of ordering a price list from FAR, waiting a few weeks, then ordering the boards and waiting a few more weeks again.

Just mail the quotes to me directly - if anyone wants to know, just mail me directly and I will forward whatever quotes I get to you instead of cluttering up the mailing list and netcom etc.

Thanks and 72

Brien Pepperdine  
VE3VAW  
Toronto, Ontario

pepperb@gov.on.ca

From owner-qrp-l@netcom.com Fri Feb 10 18:26:47 1995  
Message-Id: <9502102024.AA01498@comtech.com>  
Date: Fri, 10 Feb 1995 12:24:20 PST  
From: gap@comtech.com (Greg Prior)  
Subject: Filters and 'Q'

What I have read on filters in the Radio Amateurs Handbook doesn't make any mention of 'Q' and how it influences filters. It does seem to me though that as the 'Q' decreases, the resistance increases, and

if you were to model the filter to include this resistance, it would influence the filter - right?

So, what will be the difference between a filter with inductors with a 'Q' of 200 and one with 50? The filter I'm working on is a Chebychev (sp?) with 3 caps, and 2 inductors for 7 MHz.

Thanks,  
Greg Prior gap@Comtech.com  
Comtech Labs, Inc. Palo Alto, CA

From owner-qrp-1@netcom.com Fri Feb 10 12:11:55 1995  
Date: Fri, 10 Feb 1995 09:43:38 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: group buying QRP+  
Message-Id: <01HMOVOP7KKUGCRLZR7@tntech.edu>

All,

well seems there is a definite interest in the group purchase of the QRP+. I guess I got myself into it and will pursue it. Anyone know of what type of discount we are talking.

>From the mail so far .. looks like we are talking an ARCI club affiliate purchase.. anyone officially on the board have any objections, or want to take over?

If it is ok with the organization.. I can take everyone's email and hold onto it so that we can get an idea of the number we are talking and may be able to negotiate an open-ended deal.

PS thanks to those who responded about the 30-40.. seems that although I purchased from Small Wonders .. got an older board.. not very impressive quality, but not bad.. and no silk screen or solder mask

72,73

Jeff, AC4HF

From owner-qrp-1@netcom.com Fri Feb 10 15:45:20 1995  
Date: Fri, 10 Feb 95 11:42:38 PST  
From: Mark E Gustoff <Mark\_E\_Gustoff@ccm.ch.intel.com>  
Message-Id: <950210114238\_2@ccm.hf.intel.com>  
Subject: Re: group buying QRP+

Text item:

I have one already, but would be interested in another one given a group buy.

72,  
Mark

----- Reply Separator -----  
Subject: group buying QRP+  
Author: owner-qrp-1@netcom.com at SMTPGATE  
Date: 2/10/95 10:24 AM

All,

well seems there is a definite interest in the group purchase of the QRP+. I guess I got myself into it and will pursue it. Anyone know of what type of discount we are talking.

>From the mail so far .. looks like we are talking an ARCI club affiliate purchase.. anyone officially on the board have any objections, or want to take over?

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PS thanks to those who responded about the 30-40.. seems that although I purchased from Small Wonders .. got an older board.. not very impressive quality, but not bad.. and no silk screen or solder mask

72,73

Jeff, AC4HF

Text item: External Message Header

The following mail header is for administrative use and may be ignored unless there are problems.

\*\*\*IF THERE ARE PROBLEMS SAVE THESE HEADERS\*\*\*.

Precedence: list  
Sender: owner-qrp-1@netcom.com

Content-transfer-encoding: 7BIT  
Content-type: TEXT/PLAIN; CHARSET=US-ASCII  
MIME-version: 1.0  
X-VMS-Cc: JMG  
X-VMS-To: QRP  
Message-id: <01HMOVOP7KKUGCRLZR7@tntech.edu>  
To: qrp-l@netcom.com  
Subject: group buying QRP+  
>From: Jeff Gold <JMG@tntech.edu>  
Date: Fri, 10 Feb 1995 09:43:38 -0600 (CST)  
Received: from tntech.edu by tntech.edu (PMDf V4.3-10 #7186)  
id <01HMOVOP7KKUECRLZR7@tntech.edu>; Fri, 10 Feb 1995 09:43:38 -0600 (CST)  
Received: from tntech.edu by netcom19.netcom.com (8.6.9/Netcom)  
id HAA01785; Fri, 10 Feb 1995 07:41:21 -0800  
Received: by netcom19.netcom.com (8.6.9/Netcom)  
id HAA01793; Fri, 10 Feb 1995 07:41:24 -0800  
Received: from netcom19.netcom.com by ormail.intel.com with smtp  
(Smail3.1.28.1 #7) id m0rd015-000UehC; Fri, 10 Feb 95 10:24 PST  
Received: from ormail.intel.com by relay.jf.intel.com with smtp  
(Smail3.1.28.1 #2) id m0rd01C-000twcC; Fri, 10 Feb 95 10:24 PST

From owner-qrp-l@netcom.com Fri Feb 10 18:49:11 1995  
Date: Fri, 10 Feb 1995 15:05:16 -0800  
From: faunt@netcom.com (Doug Faunt N6TQS 510-655-8604)  
Message-Id: <199502102305.PAA29816@netcom4.netcom.com>  
Subject: Re: group buying QRP+

so, how do we joing ARCI?  
73, doug

From owner-qrp-l@netcom.com Fri Feb 10 20:47:11 1995  
From: JimN00CT@aol.com  
Date: Fri, 10 Feb 1995 18:42:47 -0500  
Message-Id: <950210184246\_18314475@aol.com>  
Subject: Re: Missed SSB Fox!

-----  
A QRO station from Iowa broke in an gave me a 57 report. I immediately  
felt something  
was wrong. I checked my watt meters and seemed to be under 10 watts.  
It just didn't seem like I should have done that well. I'll never  
be able to understand propagation! Who knows, I might even hear the  
fox one of these days. I'm already looking forward to next week.

72 es 73

Andrew - AB5WB  
-----

Hi Andrew--

I think Iowa must suffer from Special Propagation (kind've like Special Relativity). I was testing a built from scratch OXO transmitter (from the G-QRP club) that puts out about 300 milliwatts on 7.020 at 1700 UTC, and a zero call came back to me with a 579 report!!! QTH here is St. Louis, and I run a 40 meter sloping dipole that is broadside north/south. Couldn't believe my ears. I'm sure the Iowa station thought I was mistaken when I told him I was running 0.3 W.

Later that day (~1900 or so) I called CQ again and a six-lander came back to me with a 589 report! He was *\*also\** in Iowa!!

What is going on here? I believe it is Special Propagation. I think I will be working up a dissertation on this. I think I will also be /O (Iowa) for the next Sweepstakes or Field Day if I/we can prove that this phenomenon exists.

73, Jim N00CT

From owner-qrp-1@netcom.com Fri Feb 10 20:25:09 1995  
From: Byron8LCZ@aol.com  
Date: Fri, 10 Feb 1995 18:49:59 -0500  
Message-Id: <950210184958\_18315928@aol.com>  
Subject: NewEng QRP Colorburst Xtal 'test

I listened the whole hour, from 9 to 10 pm on 3.579 Thursday nite and only heard whispers of a call sign, possibly FMR. But band conditions were S5 noise and sigs were weak. So no contacts. Maybe next week. Guess you guys need a linear amplifier to run the QRP gallon full boat of 5 watts, eh?

Walt, WB8E was also listening and didnt hear much more.

72, Byron WA8LCZ

From owner-qrp-1@netcom.com Fri Feb 10 23:54:19 1995  
Date: Fri, 10 Feb 1995 13:08:39 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: possible other QRP+ way  
Message-Id: <01HMOVW28JAACRMFEG@tntech.edu>

Guys and Gals,



well just been thinking.. with the interest that seems to be here on the Internet group.. think I would consider the "Internet QRP" group a very active and real QRP organization.. we have fox hunts, prizes, and compete as teams in contests.. think I will call about the QRP+ and see if I can represent us for possible discount.

73

Jeff, AC4HF

From owner-qrp-l@netcom.com Fri Feb 10 11:49:58 1995  
Date: Fri, 10 Feb 1995 07:38:53 -0800 (PST)  
From: Monte Stark <ku7y@sage.dri.edu>  
Subject: Re: Power Measurements  
Message-Id: <Pine.SUN.3.90.950210073022.22016B-100000@nimbus>

Hi Craig,

I use a X-needle MFJ meter. Using it my 9040 has a nice 5w output.

Here at work on the \$10,000 service monitor, it only shows 3w.

Measuring the total current draw during xmit with a HP3468A, a very nice \$1,000 dmm, it was 750 ma.

Input voltage in both cases was 13.3vdc.

When I use the MFJ meter, there is some swr. The higher the swr, the higher the total power reading. I am wondering if the reflected power is adding to the forward power to give a false high reading?

Hummmmm, think I'll bring the MFJ into work and put it in line with the monitor and see how close it is then. In fact I'll bring the whole radio in and measure the rf voltage also.

Now if I could just cure the drift in the 9030.....

73's, Ron

.....KU7Y.....Monte "Ron" Stark.....  
....ku7y@sage.dri.edu.....Sun Valley, Nevada....  
.....ARRL.....NorCal #330.....NRA LIFE.....

From owner-qrp-l@netcom.com Sat Feb 11 00:21:12 1995  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)

Subject: QRP ARCI looking for new President  
Date: Fri, 10 Feb 95 22:29:19 EST5EDT  
Message-Id: <1995Feb10.222919.22496@wb3ffv.ampr.org>

Les Shattuck, the Interim President of the QRP ARCI, authorized me to put out a call for volunteers here. Les took over last year as the Interim President, until a "permanent" Pres could be found (it's actually a 2 year office), but no volunteers have stepped forward yet. Over the last 2 years I've been trying in vain to find someone myself, but no takers so far. If any of the QRP ARCI members out there are interested in applying for the job, please contact me and we'll discuss things a bit and I'll advise you on the procedures for submitting your application through channels. The QRP ARCI is also in need of some Board of Director members, but it's unclear exactly how many are needed at the moment. There will eventually be a call for BoD nominations/volunteers in the QRP Quarterly. 73 and Queue Our Pea DE  
WASMCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-1@netcom.com Fri Feb 10 08:45:08 1995  
Date: Thu, 9 Feb 1995 12:06:38 -0800  
From: myers@bigboy73.West.Sun.COM (Dana Myers)  
Message-Id: <9502092006.AA02074@vr1000.West.Sun.COM>  
Subject: Re: QRP Pen circuit

> Date: Thu, 9 Feb 1995 06:45:17 -0800 (PST)  
> From: Steven Wilson <randyw@crl.com>  
> Subject: Re: QRP Pen circuit

> What impedance do you want ? First we need to answer the question as  
> what impedance do you need. This may be easily done. The circuit per  
> the text has an output of 250 mw (0.25 watts). Assume you are using a  
> 6 volt power supply source. Then we can calculate the impedance at  
> the collector of the 2N2222.

>

> Collector Impedance =  $RL = (V_s \times V_s) / 2 P_o$        $V_s = 6$        $P_o = 0.25$

>

> Therefore  $RL = 72$  ohms

This assumes an ideal transistor, which even the 2N2222A isn't.  
The formula is really more like:

$$\text{Load on the collector} = RL = (V_{cc} - V_{ce(sat)})^2 / 2 * P_o$$

Assume  $V_{ce(sat)}$  is .5V, you get  $(6-.5)^2/2*.25 = 60$  ohms, which is different enough to pay attention to.  $V_{ce(sat)}$  is, by the way, the saturation voltage of transistor.

> Assume we are going to use an antenna with an impedance of 52 ohms.  
> The VSWR at the collector will be  $72/52$  or 1.38 , not bad for a simple  
> circuit. However, if you use a  $V_s$  of 12 volts the mismatch becomes  
> greater than 4 to 1 at the collector.

No, there is no VSWR at the collector, at least not as you described. If the load presented to the collector is other than the 60 ohms or so, the output power will be different. If you have a 52 ohm load in the above example, you need to re-arrange the power formula and plug the new collector load in. Ex:

$$\text{Power Output} = P_o = (V_{cc} - V_{ce(sat)})^2 / 2 * R_L$$

With a 52 ohm load, you get  $(6-.5)^2/2*52 = .291W$ .

If you increase the power supply to 12V, you get 1.272W.

The output power is determined by the collector voltage, impedance matching from the collector to the antenna, and the impedance of the antenna. If any of these three factors change, so does the output power.

On a side note, the reason the notion of collector VSWR is not correct is that the transistor, assuming class-C operation, always presents either a very high impedance or a very low impedance. In either case, the "SWR" calculated as a ratio of load impedance to source (transistor) impedance will be high. I don't really want to open the can of worms that continues to rage on on the rec.radio.amateur.antenna newsgroup about SWR and Maxwell; suffice it to say, there really is no notion of collector VSWR.

Any comments?

From owner-qrp-1@netcom.com Sat Feb 11 00:29:27 1995  
From: JEVERHART@cayman.VF.MMC.COM  
Date: Fri, 10 Feb 1995 15:49:09 -0500 (EST)  
Message-Id: <950210154909.2240648a@carib.vf.mmc.com>  
Subject: Re: QRP Pen circuit

Dana, you wrote, in part:

> No, there is no VSWR at the collector, at least not as you described.  
> If the load presented to the collector is other than the 60 ohms or so,

> the output power will be different. If you have a 52 ohm load in the  
> above example, you need to re-arrange the power formula and plug the  
> new collector load in. Ex:  
>  
>  $\text{Power Output} = P_o = (V_{cc} - V_{ce(sat)})^2 / 2 \cdot R_L$   
>  
> With a 52 ohm load, you get  $(6 - .5)^2 / 2 \cdot 52 = .291W$ .  
>  
> If you increase the power supply to 12V, you get 1.272W.  
>  
> The output power is determined by the collector voltage,  
> impedance matching from the collector to the antenna, and  
> the impedance of the antenna. If any of these three factors  
> change, so does the output power.  
>  
> On a side note, the reason the notion of collector VSWR is not  
> correct is that the transistor, assuming class-C operation, always  
> presents either a very high impedance or a very low impedance. In  
> either case, the "SWR" calculated as a ratio of load impedance  
> to source (transistor) impedance will be high. I don't really  
> want to open the can of worms that continues to rage on on the  
> rec.radio.amateur.antenna newsgroup about SWR and Maxwell; suffice  
> it to say, there really is no notion of collector VSWR.  
>  
> Any comments?

Good discussion! And ditto not wanting to spread the rec.radio.amateur.antenna discussion here ;-).

I gave a similar discussion of output networks, impedance and power level in the Technical Tidbits column that Mike, WA8MCQ edits in the latest QRP Quarterly. It's my latest "Joe's Quickie."

The only thing I have to add to the above, is that the formula predicts the MAXIMUM power available. Just using a static saturation drop for the transistor doesn't give a full appreciation of the drop in the transistor under class c rf conditions. It is a good formula for estimating the maximum power expected under ideal, low-loss conditions. That is, you can approach this power level, but not exceed it.

72/73,

Joe E. N2CX

From owner-qrp-l@netcom.com Fri Feb 10 16:22:37 1995  
Date: Fri, 10 Feb 1995 11:51:10 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: qrp+

Message-Id: <01HMT7K0MUQCRMFEg@tntech.edu>

well,

there had been a number of messages.. think there is an interest in group purchase of the QRP+. I have filed ALL messages together for possible later use. I think I would need official go ahead or someone from either ARCI or Norcal to sanction this.

73

Jeff, AC4HF

From owner-qrp-1@netcom.com Fri Feb 10 20:27:53 1995  
Date: Fri, 10 Feb 1995 17:32:28 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: qrp+ discount  
Message-Id: <01HMT540UAE0CRLDN3@tntech.edu>

Well hate to clog the airways.. already seem to have about 17 interested. .think if it goes over 20, I will try to get a little better discount.

wonder if there would be enough interest to do the same thing with the brass racer paddles.. some one else might want to investigate.

73,

Jeff, AC4HF

From owner-qrp-1@netcom.com Sat Feb 11 00:29:22 1995  
Date: Fri, 10 Feb 1995 13:32:49 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>  
Subject: QRP+ purchase from this group  
Message-Id: <01HMTWMBVJ1ECRM9VH@tntech.edu>

All,

OK, just got off the phone with Index labs. If we get 10 or more people for group purchase from the Internet group the price will be \$510 (plus shipping) the matching mike that is known to work is \$28. Bruce said shipping to each separate address is no problem as long as we give in the orders together. IF we order in the near future we are looking at about 5 weeks. I think if a good number of people want to definitely order, we might be able to do a little better (although maybe not), if everyone was interested, may be able to work a combined deal with mikes.

I think the best thing is for me to take info only from people who are definetly interested in purchasing.. lets say by next week I believe their policy is you don't get billed to it is shipped.

If you are interested please email me with the subject header:

"Buy-QRP+"

73

Jeff, AC4HF

From owner-qrp-1@netcom.com Fri Feb 10 11:29:18 1995  
Date: Fri, 10 Feb 95 06:43:25 EST  
From: "Stephen Martin" <martin4s@CC.IMS.DISA.MIL>  
Message-Id: <9501107924.AA792428839@CC.IMS.DISA.MIL>  
Subject: Re: Source for Hammerite paint

Subject: Source for Hammerite paint  
Author: Rich Mulvey <rkm@vectorbd.com> at smtp  
Date: 2/9/95 11:56 AM

>I got the Hammerite paint I mentioned in a previous post from a local  
>hobby shop ( Dan's Crafts and Things, for those of you near Rochester,  
>NY. ) They had black, blue, red, and grey. A standard-size spray can  
>was \$4.99. According to the can, the manufacturer is "Huntington  
>Speciality Products."

I have bought this at Lowe's Hardware. I used in on my NorCal 40 and was very pleased at the finish. I do seem to remember that it had some fairly strict time spans for painting though. If you hadn't applied a second coat within an hour or two, you had to wait weeks before you could paint it again. Or something like that.

Steve NK3R

From owner-qrp-1@netcom.com Fri Feb 10 08:33:59 1995  
From: TXREP@aol.com  
Date: Thu, 9 Feb 1995 15:20:22 -0500  
Message-Id: <950209152017\_17229044@aol.com>  
Subject: Tejas Rf Technology

There seems to a rumor floating around that Tejas RF Technology, Houston,

Texas has gone out of business. I spoke to Bill Hickox, K5BDZ, today and he assures me that Tejas is alive and well and that he has an ample supply of the Backpacker II transceivers as well as keyers and accessories ready and awaiting orders. However, Bill is moving his operation to a new location and the new address is:

Tejas RF Technology  
9215 Rowan Lane  
Houston, Texas 77036

Inquiries, request for catalogs and order should be sent to the new address.

From owner-qrp-1@netcom.com Fri Feb 10 21:28:50 1995  
From: JEVERHART@cayman.VF.MMC.COM  
Date: Fri, 10 Feb 1995 14:17:30 -0500 (EST)  
Message-Id: <950210141730.2240648a@carib.vf.mmc.com>  
Subject: Temperature compensation

The recent discussions on temperature compensation got my memory working. I think I saw mention in one of the RSGB pubs, perhaps their Radio Handbook, about a "variable temperature compensating capacitor". The stated purpose was, I believe to use in a VFO circuit to give a variable capacitance whose temperature coefficient was variable. Or perhaps it was a variable capacitor with a known tempco that could be "played off" against another variable cap with a zero or very low tempco. Does anyone, particularly our cousins across the pond have any experience with them and/or info on how we folks in the colonies could lay our hands on some?

72/73,

Joe E. N2CX

From owner-qrp-1@netcom.com Fri Feb 10 23:41:43 1995  
Date: Fri, 10 Feb 95 16:46:47 EST  
From: Clark Fishman (FSAC-FCD) <cfishman@fsac3.pica.army.mil>  
Subject: Temperature Compensation  
Message-Id: <9502101646.aa17240@FSAC3.PICA.ARMY.MIL>

The Hallcrafters HT-32 transmitters used a compensation technique that used a differential variable capacitor with two capacitors of the same value but different temperature coefficient, one cap to one stator and the other cap to the other stator...as you turned the variable, the capacitance stayed fairly constant but, the temperature coefficient was adjustable...WORKED GREAT...run the temperature up and down and tune for minimum frequency drift....

Good idea from a radio made in the 50's

From owner-qrp-1@netcom.com Fri Feb 10 12:29:24 1995

Message-Id: <n1419712240.18404@msmailgw1.arlut.utexas.edu>

Date: 10 Feb 1995 09:56:19 -0600

From: "rohre" <rohre@msmailgw1.arlut.utexas.edu>

Subject: Temperature stabilization

A query on N750 caps availability has generated a lot of thought and comment among several here.

The original postee wanted to tame a MFJ rig; but any home built could end up in that need, the need to stop a drifty VFO.

Bruce, W6TOY/3 and I have been commenting some off net, and I agree and would add to his thought: A shield box taller than the VFO components so as to shield them from heat sources on the sides and open at the top is often seen in stable VFO's. The Heath HW 101, a tube rig mostly, had a FET VFO in a little box, with even a top on it.

I blue-skyed on the use of pieces of foam to insulate a box around a VFO, and I think some have tried the foam in a can. (IT can be cut for mods. later). Bruce's post reminded me of a VHF receiver or two of the pocket type from Radio Shack and others that have the frequency determining components slathered over with melted wax to keep the air wound coils rigid, and I guess to keep everything out of drafts. Someone made the point that wire coils and some coil forms are very susceptible to thermal effects. I believe some on here have alluded to the old Toroid winders trick of baking a newly wound toroid warm, not hot, to set the wires and stabilize the winding. ( If I misremember the procedure, please correct me Mike and others.)

Last, and unrelated: Last nite had a wire line conversation with well known QRP'er

Fred Bonavita who sends regards to group. Fred will be on from San Antonio TX in Mar. or so with a Ten Tec 6 meter translator! At least March is the promised delivery. Thanks to all who shared their TT translator opinions here. I told Fred he has to also get on qrp-l, but he counters he hears we spend more time here than operating----maybe guilty!

73,

Stuart K5KVH      rohre@arlut.utexas.edu

From owner-qrp-l@netcom.com Fri Feb 10 14:37:07 1995

Message-Id: <9502101802.AA23130@us4rnc.pko.dec.com>

Date: Fri, 10 Feb 95 13:02:41 EST

From: "N100Q Tom R. @ MR01 10-Feb-1995 1242" <randolph@est.enet.dec.com>

Subject: RE: Temperature stabilization

> A shield box taller than the VFO components so as to  
> shield them from heat sources on the sides and open at the top is often seen  
> in stable VFO's. The Heath HW 101, a tube rig mostly, had a FET VFO in a  
> little box, with even a top on it.



The problem here is that the box only shields from air currents (convection). The main drift problem in my homebrew 40m tx is from heat conduction through the case, ckt boards, etc. I thought about and rejected various box and insulation schemes... even totally enclosed in foam insulation, the wiring will still conduct in some heat.

So I took the approach of compensating for temperature with various temp. coefficient caps... that way I can leave the VFO wide open for easy access. I need to do more fiddling with the caps.

BTW, DeMaw recommended dunking the VFO toroid in Q-dope to hold the wire in place. Q-dope is apparently polystyrene dissolved in carbon tetrachloride. I dunked mine in polyurethane, which is supposedly an ok substitute.

-Tom R. N100Q randolph@est.enet.dec.com

From owner-qrp-l@netcom.com Fri Feb 10 15:19:45 1995  
Date: Fri, 10 Feb 1995 12:24:46 -0500 (EST)  
From: "DONALD A. COLEMAN (EXT. 2850)" <DACOLEMAN@fair1.fairfield.edu>  
Subject: Re: Temperature stabilization  
Message-Id: <01HMOVU82612E8Y7X5Z@fair1.fairfield.edu>

These comments are excellent, but I thought i'd put two cents (uninflated, I hope) here. One way to deal with drift--but it's crude, that's for sure--is to use two different kinds of circuit in the home-built vfo--Hartley and Colpitz, for instance. With some juggling of cap values in the dual circuit, you can get the upward drift of one to cancel the downward drift of the other. It's not as hard in practice, for some reason, as it looks and sounds in theory. I'd apology for how dumb this suggestion sounds, except that I know for a fact that it does work.

72.949266585

Don Coleman, W1VOQ

From owner-qrp-l@netcom.com Fri Feb 10 18:51:45 1995  
From: LVE1@inel.gov  
Message-Id: <9502102236.AA13751@garnet.inel.gov>  
Date: Fri, 10 Feb 1995 15:37:33 -0700  
Subject: Re: Temperature stabilization

>A query on N750 caps availability has generated a lot of thought and comment  
>among several here.

>

>The original postee wanted to tame a MFJ rig; but any home built could end up  
>in that need, the need to stop a drifty VFO.

>

If you are refering to my request for sources of N750 caps, the rig in question is a TenTec 509; so it ain't just home built rigs...

>Bruce, W6TOY/3 and I have been commenting some off net, and I agree and would add to his thought: A shield box taller than the VFO components so as to shield them from heat sources on the sides and open at the top is often seen in stable VFO's. The Heath HW 101, a tube rig mostly, had a FET VFO in a little box, with even a top on it.

>

That will shield from convection, but NOT conduction; Al is a good heat conductor, you know...

>I blue-skyed on the use of pieces of foam to insulate a box around a VFO, and I think some have tried the foam in a can. (IT can be cut for mods. later).

>

That might cut out short term fluctuations, but it will also increase the time to reach temperature equilibrium; in other words, it will just prolong the time required for the VFO to reach its final temperature and frequency.

>Bruce's post reminded me of a VHF receiver or two of the pocket type from Radio Shack and others that have the frequency determining components slathered over with melted wax to keep the air wound coils rigid, and I guess to keep everything out of drafts.

>

I think the idea is to keep them rigid...

> Someone made the point that wire coils and some coil forms are very susceptible to thermal effects. I believe some on here have alluded to the old Toroid winders trick of baking a newly wound toroid warm, not hot, to set the wires and stabilize the winding. ( If I misremember the procedure, please correct me Mike and others.)

>

Part of the "black art", but not a cure-all.

It has been my experience that there will always be some net temperature coefficient, either positive or negative, due the additive effects of the temperature coefficients of coil forms (and slugs, toroids, whatever), capacitors, and active components (transistors, FET's, whatever). Of course, one tries to minimize this by using NPO caps and all the other "tricks of the trade". But you will STILL end up with some net temperature coefficient -- and this can be compensated for by the PROPER choice of temperature compensating capacitors. I would bet the price of a new final (QRP only -- no 1000XP-whatevers) that if you look inside good stable VFO's you will find at least one temperature compensating cap! (Its best to do all the temperature compensation in one place, if possible). Not talking about crystal controlled PLL's here -- but even then you might find a

compensating cap in the crystal oscillator and/or VCO.

So now you have my two (binary) bits worth on the subject... which is appropriate since my original info request seems to have generated this whole "thread" anyway!

Have a good weekend, all...

-----  
"Any opinions expressed herein are my own and probably do  
not agree with those of my employer, the U.S. Government  
or my spouse"

--... ..--

Larry V. East (W1HUE)

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From owner-qrp-l@netcom.com Fri Feb 10 16:23:02 1995

From: JEVERHART@cayman.VF.MMC.COM

Date: Fri, 10 Feb 1995 13:23:02 -0500 (EST)

Message-Id: <950210132302.2240648a@carib.vf.mmc.com>

Subject: Thursday Evening (kinda long, grumpy)

#### Anatomy of a Thursday Evening

6:30 Hmmm, 79'er Sprint night, no xtal rig, wife out shopping. Where's that ONER kit?

6:40 Found kit sans instructions and pwb. Took `em out of kits to photocopy last Summer.

6:48 OK got everything on the bench, lets go! Gotta be sure of European transistor basing

6:50 Made sure all the components are here. I'll wind L1 first.

6:55 People gripe about toroids! 12 turns of hair-sized wire on a bead severely challenge the ham-handed myope. Now to stuff the board. Wife back from store.

6:58 Oops, R3 installed and soldered in wrong place. Out comes the SolderWick.

7:15 All parts on board. Where's the crystal?

7:20 Xtal on, wires in place. Gotta add a pi filter on the output.

7:28 Found two 750 pf capacitors. Now wind 21 turns on T50-2.

7:35 Is filter right? Autek Analyzer gives 50 ohms for caps at 3.9 MHz and 62 ohms for inductor. Close enough to 50 ohms. Tack 'em to side of board.

7:51 Dug out OHR wattmeter, coax cables and dummy load. Output power about 700 mW. Great!

7:53 Can't use onboard keying circuit because oscillator always on. Key b+ lead. A little chirpy, but what the heck. About an hour left before Sprint time.

7:57 Found ONER QSK board, parts and directions. Don't need sidetone so will build board without.

8:05 Tested relay with 6 volt battery. Does work with 12 volts. Disregard 6 volt directions.

8:34 QSK board parts stuffed. Add wires to check out.

8:45 Testing. T/R relay contacts for receiver antenna switching and receiver B+ OK. Transmit contacts NG. Bad relay?

8:55 Can't use QSK circuit. Find wire to throw out window into pine tree. Will use as separate receive antenna for Argo 509 receiver. 5 minutes to Sprint.

9:05 OK, wire in tree (whew, wonder what wind chill is tonight?), receiver on, all clip leads in place, got pencil, paper.

9:10 Nothing heard in 5 minutes of listening +/- 3 kHz from 3579. CQ CQ CQ TEST de N2CX N2CX N2CX/X K. Nothing heard in reply. Will CQ every few minutes.

9:15 No signals anywhere near 3579. Tune up to 3652. Yep, there's SXA32 at about 579. This is Greek military station so receiver and antenna work. Tune back to 3579.

9:30 Getting tired of hearing color burst oscillator in wife's tv set. Only S6. Haven't heard ANY amateur signals near 3579. Still calling CQ TEST every few minutes.

9:50 Still haven't heard any activity. Keying hand tired from calling CQ. Wife made popcorn. Think I'll go watch the end of the Flyers game. They are losing 3-0 in the 3rd period....

Well that was it for the night. I'm not sure if there was no activity or I just couldn't hear anything. At least the crystal controlled rig is up and running.

72/73,

Joe E. N2CX

From owner-qrp-1@netcom.com Fri Feb 10 19:59:04 1995  
From: RobCap@aol.com  
Date: Fri, 10 Feb 1995 15:46:54 -0500  
Message-Id: <950210154653\_18197269@aol.com>  
Subject: Re: Tiny Paddles

Yes. The bottom of the radio sits on top of the "works" of the Brass Racer which is mounted upside down.

The wooden base and the heavy triangular brass base of the Brass Racer are not used. Rather, the radio now becomes the base.

The middle brass block is attached to ground. The posts are attached to the bottom of the rig with screws, and are connected with insulated bushings so dot and dash are not grounded.

I went to the hardware store and replaced the hardware as follows: (the original hardware won't work, because it's way too long).

Brass Block: 2 screws, #8-32, 1/4 inch  
Posts: 1 screw each, #8-32, 3/8 inch

I used the nylon bushings that came with the Brass Racer, but I cut them down to size so the tubes were much shorter, about 1/32 of an inch. Paddle wires are connected \*inside\* of the rig, so no cable is showing.

One thing to be aware of. The rig is tilted up, so long things sticking out of the back can bump against the table. The Sierra's BNC connector went through a rather long BNC-to- PL-259 connector, which wouldn't clear the tabletop. So I replaced the BNC connector of the Sierra with a nice short PL-259 which works great. I happen to prefer the PL-259 anyway, and am standardized on it with all of my Field Day equipment. Study this before you build your Norcal 40-A, because that little BNC is a bear to remove (it has four posts, soldered into plated-through holes). Much easier to install the PL-259 from the start.

Another little thing. Keyers like to have non skid rubber feet so they don't slide around. The rear of the Sierra has rubber feet, and I mounted a thin rubber pad on the Brass Racer block, so the little guy doesn't skid all over the place.

I'm also waiting for the Norcal 40-A. There is a lot of talent in the Norcal group, to create such great radios. I understand that the little jewel draws about 15 mAmps of current, less than many common LED lamps. Amazing. The Sierra draws only 35 mA on receive. You have to tip your hat to Norcal, and to Wayne Burdick (not to mention Vibroplex, another outstanding outfit).

Have fun! It looks great!

73,

Rob, WA3ULH

From owner-qrp-1@netcom.com Fri Feb 10 04:11:19 1995  
Date: Thu, 09 Feb 1995 23:31:41 GMT  
From: frank@yorks.demon.co.uk (FRANK W LEE, G3YCC)  
Message-Id: <256@yorks.demon.co.uk>  
Subject: Re: Welcome messages, tnx.

Hi All.

Many thanks for the words of welcome to this elite band of qrp-ers. It is nice to know there are so many interested in REAL RADIO. I hope no one minds me sending out a general thank you, rather than an individual one, the only reason being lack of time!

So far as commercial rigs are concerned, I and many others over here in UK, and I suspect elsewhere, mourned the departure of the old Argonaut 515, surely one of the best and reasonably priced rigs for the qrp-er of it's day. They hold their price so well here that IF one can find a rig for sale, it will cost as much (or more!) than it did new. In my opinion it would be a great boon to the hobby to re-issue this model to us; I don't like the new Argo personally and there is very little, or nothing to replace the 515, for me at any rate, but each to his own!

I am grateful to those who offered to obtain materials for me from USA. I now have all the help I need and will be reciprocating in the same way.

Are there any subscribers to this box in VK5?

Frank G3YCC (G QRP Club 042) QTH: Hull, East Yorkshire (QTHR), packet via G3YCC@GB7HUL